

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date  
27 January 2005 (27.01.2005)

PCT

(10) International Publication Number  
WO 2005/007624 A2

(51) International Patent Classification<sup>7</sup>:

C07D

(21) International Application Number:

PCT/US2004/021813

(22) International Filing Date: 7 July 2004 (07.07.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/485,451 7 July 2003 (07.07.2003) US  
60/513,109 20 October 2003 (20.10.2003) US

(71) Applicant (for all designated States except US): THE SCRIPPS RESEARCH INSTITUTE [US/US]; 10550 North Torrey Pines Road, La Jolla, CA 92037 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): ANDERSON, Christopher, J. [US/US]; 124 Mason St., Apt.401, San Francisco, CA 94102 (US). SCHULTZ, Peter, G. [US/US]; 1650 La Jolla Ranch Road, La Jolla, CA 92037 (US). SANTORO, Stephen [US/US]; 10 Shady Hill Square, Cambridge, MA 02138 (US).

(74) Agents: QUINE, Jonathan, Alan et al.; Quine Intellectual Property Law Group, P.C., P.O. Box 458, Alameda, CA 94501 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2005/007624 A2

(54) Title: COMPOSITIONS OF ORTHOGONAL GLUTAMYL-tRNA AND AMINOACYL tRNA SYNTHETASE PAIRS AND USES THEREOF

(57) Abstract: Compositions and methods of producing components of protein biosynthetic machinery that include glutamyl orthogonal tRNAs, glutamyl orthogonal aminoacyl-tRNA synthetases, and orthogonal pairs of glutamyl tRNAs/synthetases are provided. Methods for identifying these orthogonal pairs are also provided along with methods of producing proteins using these orthogonal pairs.